

Remarks/Arguments:

Claims 1-21 are pending in the present application.

Rejections under 35 U.S.C. § 102(b)

Claims 1, and 3-21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Jeffries et al. (U.S. Patent No. 5,815,371).

Applicants respectfully traverse these rejections.

Claim 1 has been amended.

Claim 1, as amended, recites "one or more recesses at least partially defined by at least one of said fins, said one or more recesses being configured to support the edge of the circuit card." Amended Claim 1 is neither disclosed nor inherent in Jeffries. As shown in Jeffries' Figure 2, the notch 40 is not defined by any of the fins 36a, 36b, 36c. Applicants submission of lack of inherency is supported by, among others, these statements in Jeffries: Column 2, lines 13 - 19 and lines 28 - 30, and Claim 1. In particular, Column 2, lines 17 - 19 state:

"... the heat dissipator . . . supports and secures the daughter board to the mother board."

This function of the dissipator 24 could not be carried out if the notch 40 was defined by the fins 36a, 36b, 36c, since at least one of the two connected boards 12, 14 would not be directly in contact with the dissipator 24, and the whole assembly would be mechanically unstable.

Applicants therefore respectfully submit that amended Claim 1 overcomes rejection under 35 U.S.C. § 102(b).

Claims 3-9 are dependent from Claim 1 and therefore overcome these respective rejections for at least the same reasons as given for amended claim 1. Applicants have herewith amended Claim 7 for clarity.

Independent Claim 10 has been amended. Applicants respectfully submit that amended Claim 10 overcomes the rejection.

Jeffries discloses a heat dissipator designed to work in conjunction with a combination of motherboard and daughterboard, the combination forming a single unit. See e.g. col 2, lines 14 - 19 and 26 - 30; col 2, line 66 - col. 3, line 18; col. 3, lines 19 - 22; col. 4, lines 31 - 36.

Claim 10, as amended, recites "A method for supporting a circuit card in a computer system, said method comprising performing in order the steps of: affixing in a computer system a heat sink having a recess configured to receive an edge of a circuit card, thereby orienting the heat sink to position the recess to receive an edge of the circuit card; and positioning the edge of the circuit card in the recess." (Emphasis added.) By contrast, amended Claim 10 recites affixing in a computer system a heat sink, and later positioning the edge of the circuit card in the recess. If this is attempted with the Jeffries disclosures, one of two things will happen. First, if the mother board is sufficiently wide, positioning the edge of a circuit card in the recess 40 will be blocked by the support plates 32, 34 and screws (see, e.g. column 3, lines 52 - 58). Second, if the motherboard is sufficiently narrow to allow the aforementioned positioning, then the heat dissipator cannot be attached to the motherboard in the manner disclosed e.g. at column 3, lines 53 - 57.

In both of these cases, none of the advantages disclosed in Jeffries at e.g. column 3 line 52 - column 4, line 20 -- e.g. mechanical support, electrical and thermal connection to the ground plane, heat dissipation, faraday cage shielding, etc. -- can be achieved. This remains true for at least similar reasons if the motherboard is not present.

Applicants therefore respectfully submit that amended Claim 10 overcomes the rejection.

Claims 11-14 are dependent from Claim 10 and therefore overcome the respective rejections for at least the same reasons as those given for amended claim 10.

Independent Claim 15 has been amended. Applicants respectfully submit that amended Claim 15 overcomes the rejection.

Claim 15, as amended, recites "a heat sink thermally coupled to said heat generating component and having a plurality of fins for dissipating heat, said heat sink defining a recess for supporting and guiding an edge of a circuit card, said recess at least partially defined by at least one of said fins." (Emphasis added.)

Amended Claim 15 is neither disclosed nor inherent in Jeffries. As shown in Jeffries' Figure 2, the notch 40 is not defined by any of the fins 36a, 36b, 36c. Applicants submission of lack of inherency is supported by, among others, these statements in Jeffries: Column 2, lines 13 - 19 and lines 28 - 30, and Claim 1. In particular, Column 2, lines 17 - 19 state:

" . . . the heat dissipator . . . supports and secures the daughter board to the mother board."

This function of the dissipator 24 could not be carried out if the notch 40 was defined by the fins 36a, 36b, 36c, since at least one of the two connected boards 12, 14 would not be directly in contact with the dissipator 24, and the whole assembly would be mechanically unstable.

Claims 16 and 17 are dependent from Claim 15 and therefore overcome the respective rejections for at least the same reasons as those given for amended claim 15.

Independent Claim 18 has been amended. Applicants respectfully submit that amended Claim 18 overcomes the rejection.

Claim 18, as amended, recites "a surface defining one or more slots configured to guide an edge of a circuit card; and heat dissipating fins thermally coupled to said surface, said one or more slots at least partially defined by at least one of said fins, . . . " . (Emphasis added.) Applicants respectfully submit that amended Claim 18 is neither disclosed nor inherent in Jeffries, for at least the same reasons as those stated above with respect to amended Claim 15.

Claims 19 and 20 are dependent from Claim 18 and therefore overcome the respective rejections for at least the same reasons as those given for amended claim 18. Independent Claim 21 has been amended. Applicants respectfully submit that amended Claim 21 overcomes the rejection. Claim 21, as amended, recites "sliding an edge portion of the circuit board in a recess defined by a heat sink of the computer system, thereby guiding the circuit board."

(Emphasis added.) This feature of Claim 21 is supported in the specification at least in Figure 2 and at page 4, lines 24 - 26. No new matter has been introduced. By contrast, amended Claim 21 is neither disclosed nor suggested in Jeffries. Indeed, it is at least suggested in Jeffries (at least in Figure 2; Column 2, lines 5-7; Column 2, lines 13 - 31; and Claim 1) that, at least, the chip 22, and the boards 12, 14 must be fixed in position before the dissipator 24 is positioned.

For all the reasons stated above, applicants respectfully submit that all rejections of Claims 1-21 under 35 U.S.C. § 102(b) have been overcome.

Rejections under 35 U.S.C. § 103(a)

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jeffries in view of Atkinson et al. (U.S. Patent No. 6,680,849).

Applicants respectfully traverse this rejection. Section 2143 of the MPEP states:

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

(Emphasis added.)

Applicants respectfully submit that at least the third criterion, emphasized above, has not been met in the rejection of Claim 2 under 35 U.S.C. § 103(a).

Claim 2 is dependent from Claim 1 and thus incorporates all the limitations of Claim 1 by reference. Claim 1, as amended, recites "one or more recesses at least partially defined by at least one of said fins, said one or more recesses being configured to support the edge of the circuit card." At least some limitations in Amended Claim 1 are neither disclosed nor suggested in Jeffries. As shown in Jeffries' Figure 2, the notch 40 is not defined by any of the fins 36a, 36b, 36c. Applicants submission of lack of disclosure is supported by, among others, these

statements in Jeffries: Column 2, lines 13 - 19 and lines 28 - 30, and Claim 1. In particular, Column 2, lines 13 - 19 state:

“. . . the heat dissipator . . . supports and secures the daughter board to the mother board.”

This function of the dissipator 24 could not be carried out if the notch 40 was defined by the fins 36a, 36b, 36c, since at least one of the two connected boards 12, 14 would not be directly in contact with the dissipator 24 , and the whole assembly would be mechanically unstable. Thus, Jeffries does not teach or suggest all the claim limitations of amended Claim 1.

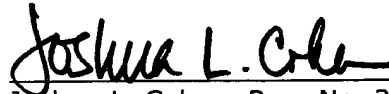
The Atkinson reference does not overcome that deficiency of Jeffries. Applicants therefore respectfully submit that prima facie obviousness of Claim 2 is not supported in view of amended Claim 1.

For all the reasons stated above, applicants respectfully submit that rejection of Claim 1-2 under 35 U.S.C. § 103(a) has been overcome.

Conclusion

In view of the amendments and arguments set forth above, applicants respectfully submit that the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,



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